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THE CITY OF NEW YORK.

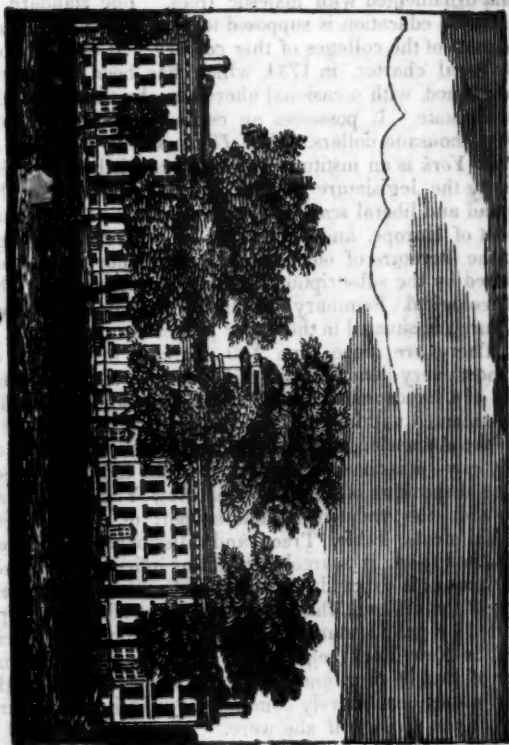
WE do not believe there is another city in the world, of no greater magnitude than New York, that strikes the beholder, at first view, with so high an idea of its commercial advantages, its business, and its wealth. Its situation is one of the finest in the world; its roadsteads and its harbor are the envy of every foreign traveller, and the pride of every American. Whether the stranger first beholds it from the eastern or northern entrances to its harbor, or whether he comes in from the sea, the view is equally delightful. If he approaches it from Long Island Sound, what can be more beautiful to the eye than the country seats which adorn both sides of the East river? and as you enter the harbor, the long line of wharves, surrounded by a forest of masts, and fronted by a range of stores as far almost as the eye can reach; the city gently sloping from north to a southern point, and its spires outnumbered only by its masts, and scattered over an area of some miles, forms a picture, at a single glance, not equalled in America; while from the southern entrance, on the one hand, the eye stretches far up the Hudson, as the chasm which contains the bed of that mighty river opens upon the view, like the jaws of some huge monster, its wood crowned banks appearing in the distance, as though they almost met each other, and in the dizzy height did greet as neighbors by a friendly touch; while below them lies Manhattan, once the weakest little island in the whole cluster, now

the seat of the finest city in America, whose swelling population are crowding over to the shores of the surrounding country, whose importance is felt in every quarter of the globe, whose funds are in every country,—whose trade is with every people.

The city stands on an island formed by the Hudson and East rivers, and a small river called *Haerlem*, which connects them. The length of this island is about fifteen miles from south to north; with an average breadth of about one mile and a half; situated upon a noble harbor, at the mouth of one of the finest navigable rivers in the world; it enjoys a monopoly of the trade of a large and wealthy district of the interior. Hence the increase of the city has kept pace with the development of trade and industry in the neighboring states. The rapid augmentation of population, commerce, and every material of prosperity which the city has witnessed in recent years, is almost without a parallel. Founded by the Dutch in 1614, by the name of *New Amsterdam*, it did not for a century exceed Boston in point of numbers—but with the settlement of the interior of the state, and the opening of the navigation of the great lakes, New York received an impulse which, added to other advantages, has established its present, and secured its future pre-eminence. In respect to its commerce, it is the second city in the world. Many of the streets of the southern or *ancient* part of the city are narrow and crooked, but are every year becoming more convenient. The *modern* or northern part of the city has been laid out in regular squares, and contain many splendid buildings. The finest street is Broadway, which traverses the city in a straight line, commencing at the Battery; it is eighty feet in breadth, and three miles in length, and few streets in the world equal it for the splendor, bustle, and fashion it exhibits.

There are numerous schools of all kinds in the city, in which all classes and colors may be accommodated, so that it is not too much to say, that the means of obtaining such an education as is essential to the ordinary occupations and pursuits of life, are within the reach of

COLUMBIA COLLEGE.



all who will exert themselves to make use of them. There are also two colleges—Columbia College, situated on an open square, near the Park, west of Broadway, and ornamented with majestic trees. The standard of classical education is supposed to be higher in this than in most of the colleges of this country. It was founded by royal charter, in 1754, which has been frequently confirmed, with occasional alterations, by the legislature of the state. It possesses an estate valued at four hundred thousand dollars. The *University of the City of New York* is an institution recently established, chartered by the legislature in 1831. It is projected on the broad and liberal scale of the universities on the continent of Europe, and promises to be of great advantage to the literature of our country. Its funds have been raised by the subscriptions of liberal individuals. The Theological Seminary of the Protestant Episcopal Church is situated in the upper part of the city.

There are more than 100 churches in the city, of almost every denomination of believers; of these, some are of a handsome order of architecture, and splendidly ornamented within. The portico in front of the church of the Ascension, in Canal Street, would do honor to any city—it is chaste and classical in the highest degree. The disposition of the people of New York is liberal towards the endowment and support of religious establishments, Bible, Tract, and Missionary Societies, &c., and there is scarcely a want or infirmity to which our nature is exposed, which has not a resource in some one of the different charitable institutions which are supported by public munificence or private charity. Neither is New York behind her sister cities in the number of her literary and scientific institutions, although her almost exclusively commercial pursuits might furnish some apology if she were.

The population in 1697, was 4302—in 1790, 33,031—in 1800, 60,489—in 1810, 96,373—in 1820, 123,706—in 1830, 207,021. The present population is supposed to amount to two hundred and thirty-five thousand souls.

CALENDAR OF NATURE.

MARCH.

MARCH is a rude and sometimes boisterous month, possessing many of the characteristics of winter, yet awakening sensations perhaps more delicious than the two following spring months, for it gives us the first announcement and taste of spring. What can equal the delight of our hearts at the very first glimpse of spring—the first springing of buds and green herbs. It is like a new life infused into our bosoms. A spirit of tenderness, a burst of freshness and luxury of feeling possesses us,—and let fifty springs have broken upon us, *this* joy, unlike many joys of time, is not an atom impaired. Are we not young? Are we not boys? Do we not break, by the power of awakened thoughts, into all the rapturous scenes of all our happier years? There is something in the freshness of the soil—in the mossy bank—the balmy air—the voices of birds—the early and delicious flowers, that we have seen and felt *only* in *childhood* and *spring*.

There are frequently mornings in March, when a lover of nature may enjoy in a stroll, sensations not to be exceeded, or perhaps equalled, by any thing which the full glory of summer can awaken:—mornings which tempt us to cast the memory of winter, or the fear of its return, out of our thoughts. The air is mild and balmy, with, now and then, a cool gush by no means unpleasant, but, on the contrary, contributing towards that cheering and peculiar feeling which we experience only in spring. The sky is clear—the sun flings abroad not only a gladdening splendor, but an almost summer glow. The world seems suddenly aroused to hope and enjoyment. The fields are assuming a vernal greenness—the buds are swelling in the hedges—the banks are displaying amid the brown remains of last year's vegetation, the luxuriant weeds of this. There are arums,

ground-ivy, the glaucous leaves and burnished flowers of the pilewort,

The first gilt thing
That wears the trembling pearls of spring,

and many other fresh and early bursts of greenery. All unexpectedly, too, in some embowered land, you are arrested by the delicious odor of violets, those sweetest of Flora's children, which have furnished so many pretty allusions to the poets, and which are not yet exhausted—they are like true friends, we do not know half their sweetness till they have felt the sunshine of our kindness—and again, they are like the pleasures of our childhood, the earliest and the most beautiful. Now, however, they are to be seen in all their glory—blue and white—modestly peering through their thick, clustering leaves. The lark is caroling in the blue fields of air—the blackbird and thrush are again shouting and replying to each other from the tops of the trees. The woods, though yet unadorned with their leafy garniture, are beautiful to look on—they seem flushed with life. Their boughs are frequently of a clear and glossy lead color, and the tree tops are rich with the vigorous hues of brown, red, and purple; and if you plunge into their solitudes, there are symptoms of revivification under your feet—the springing mercury and green blades of the blue bells—and perhaps above you, the early nest of the thrush, perched between the boughs of a young oak, to tinge your thoughts with the anticipations of summer. These are mornings not to be neglected by the lover of nature; and if not neglected they are not forgotten, for they will stir the springs of memory, and make us live over again, times and seasons that we cannot, for the pleasure and purity of our spirits, live over too much.

March, which was the first month in antiquity, was named so after Mars, the god of war, because he was the father of their first prince. This, at least, is the reason given by Ovid. The Saxons called it *Lenct-monath*, because the days now began in length to exceed

the nights. *Lenct* also means *spring*, therefore it was their spring month. It was called too, by them, *Rhed-monath*, from Rheda, one of their deities, to whom sacrifices were offered in March, and from *raed*, council, March being the month wherein wars or expeditions were undertaken by the gothic tribes. They also called it *Hlyd-monath*, or the *stormy month*.

 THANATOPSIS.

TO HIM who in the love of nature holds
 Communion with her visible forms, she speaks
 A various language; for his gayer hours
 She has a voice of gladness, and a smile
 And eloquence of beauty, and she glides
 Into his darker musings, with a mild
 And gentle sympathy, that steals away
 Their sharpness, ere he is aware. When thoughts
 Of the last bitter hour come like a blight
 Over thy spirit, and sad images
 Of the stern agony, and shroud and pall,
 And breathless darkness, and the narrow house,
 Make thee to shudder, and grow sick at heart;—
 Go forth, under the open sky, and list
 To Nature's teachings, while from all around—
 Earth and her waters, and the depth's of air,—
 Comes a still voice—Yet a few days, and thee
 The all-beholding sun shall see no more
 In all his course; nor yet in the cold ground,
 Where thy pale form was laid, with many tears,
 Nor in the embrace of ocean shall exist
 Thy image. Earth, that nourished thee, shall claim
 Thy growth, to be resolved to earth again;
 And, lost each human trace, surrendering up
 Thine individual being, shalt thou go
 To mix for ever with the elements,
 To be a brother to the insensible rock
 And to the sluggish clod, which the rude swain
 Turns with his share, and treads upon. The oak
 Shall send his roots abroad, and pierce thy mould.
 Yet not to thy eternal resting place
 Shalt thou retire alone—nor couldst thou wish
 Couch more magnificent. Thou shalt lie down
 With patriarchs of the infant world—with kings,
 The powerful of the earth—the wise, the good,
 Fair forms, and hoary seers of ages past,
 All in one mighty sepulchre.—The hills
 Rock-ribbed and ancient as the sun,—the vales
 Stretching in pensive quietness between;
 The venerable woods—rivers that move
 In majesty, and the complaining brooks
 That make the meadows green; and poured round all,
 Old ocean's gray and melancholy waste,—

Are but the solemn decorations all
 Of the great tomb of man. The golden sun,
 The planets, all the infinite host of heaven,
 Are shining on the sad abodes of death,
 Through the still lapse of ages. All that tread
 The globe are but a handful to the tribes
 That slumber in its bosom.—Take the wings
 Of morning—and the Barcan desert pierce,
 Or lose thyself in the continuous woods
 Where rolls the Oregon, and hears no sound,
 Save his own dashings—yet—the dead are there,
 And millions in those solitudes, since first
 The flight of years began, have laid them down
 In their last sleep—the dead reign there alone.
 So shalt thou rest—and what if thou shalt fall
 Unheeded by the living—and no friend
 Take note of thy departure? All that breathe
 Will share thy destiny. The gay will laugh
 When thou art gone, the solemn brood of care
 Plod on, and each one as before will chase
 His favorite phantom; yet all these shall leave
 Their mirth and their employments, and shall come,
 And make their bed with thee. As the long train
 Of ages glide away, the sons of men,
 The youth in life's green spring, and he who goes
 In the full strength of years, matron, and maid,
 And the sweet babe, and the gray-headed man,—
 Shall one by one be gathered to thy side,
 By those, who in their turn shall follow them.
 So live, that when thy summons comes to join
 The innumerable caravan, that moves
 To that mysterious realm, where each shall take
 His chamber in the silent halls of death,
 Thou go not, like the quarry-slave at night,
 Scourged to his dungeon, but sustained and soothed
 By an unfaltering trust, approach thy grave,
 Like one who wraps the drapery of his couch
 About him, and lies down to pleasant dreams.—*Bryant.*

EXTRAORDINARY PRESERVATION OF LIFE UNDER SNOW.

THE following event, which occurred during the remarkable hard winter of 1708–9, is recorded on the most unquestionable authority. A poor woman near Yeovil, in Somersetshire, having been at Chard to sell her yarn, in her return home fell so very ill that she was forced to take refuge in a small house by the way-side, and being towards evening, she desired the people that they would let her sit by the fire during night. This was denied.—She left the house, and feeling very ill, laid herself down under a hedge. It snowed very hard; and in a little

time she was almost covered by it. At last one of her neighbors came by, who asked her how she could be so mad as to lie there to be starved. She said her sickness was so violent she could not possibly go further.—He then took her up, and bade her try as well as she could, adding, it was not so very far for her to go. She followed him a little way, but, unable to persevere, she left him, and laid herself down under the hedge again. She was soon covered with the snow, which was falling very thick. Thus she continued for nearly a week, her neighbors, meanwhile, making great inquiries after her: but no one could give any account except that one man; and he kept silent for fear of a suspicion falling upon him that he had made away with her.

During this surprise, a poor woman dreamed (or rather pretended to have dreamed, the man having probably suggested to her this expedient to save his conscience and his neck) that she lay under a hedge in such a place. Her neighbors immediately went to the place with sticks, which they forced through the snow; at last one of them thought he heard a groan: upon which he thrust his stick down with more force, which made the woman cry out, "Oh, for God's sake, don't kill me." She was taken out, to the astonishment of them all, and was found to have taken great part of her upper garment for sustenance. She told them she had lain very warm, and had slept most part of the time.—One of her legs lay just under a bush, so that it was not quite covered with snow, by which it became almost mortified, but (says the contemporary narrator) it is likely to do very well. She was very cheerful, and soon walked. She lay under the hedge at least seven days.

In February, 1799, a similar imprisonment in the snow, but attended ultimately with more fatal consequences, was the lot of Elizabeth Woodcock, aged 42, between Impington and Cambridge. She was riding from market, when her horse, frightened by a meteor, started, and running backward, approached the edge of a ditch. She dismounted, and the horse ran from her. She overtook him, and continued leading him, till worn down

with fatigue, and under the load of a heavy basket full of her marketings, she addressed the horse: "Tinker, I am too tired to go any further; you must go home without me."



Elizabeth Woodcock.

She set herself down, and was soon covered with snow. Here, in a sort of cavern, she was buried alive for eight days. On the morning after her first enclosure, she contrived to break off a stick from the hedge, and tying her handkerchief to it, she thrust it through an opening in the snow. She was certainly sensible all the time, and overheard the conversation of some gypsies; but although

she cried as loud as she could, they did not (as they declared) hear her. On the second Sunday, Joseph Muncy, a farmer, on his way home from Cambridge, was drawn to the place by the appearance of the handkerchief, and discovering who it was, went for help. A shepherd who came, said, "Are you there, Elizabeth Woodcock?" She replied in a feeble, faint voice, "Dear John Stittle, I know your voice; for God's sake help me out." Stittle made his way through the snow; she eagerly grasped his hand and said, "I have been here a long time." "Yes," answered he, "since Saturday." "Ay, Saturday week," she replied; "I have heard the bells go two Sundays for church."

She was then taken home, and a most fatal treatment was she subjected to. They gave her strong liquors, and applied poultices of stale beer and oat-meal boiled together. The direct contrary to which, under Providence, would have restored her. She lost her toes, and lingered on till the following July, when she died.

The following remarks deserve the serious attention of every one: they appear to be founded on the soundest principles. "The application of heat to the human body after intense cold, is attended with the most dreadful consequences; it always produces extreme pain, and most frequently, either partial or general mortification of the parts to which the heat is applied. Instead, therefore, of allowing persons who have suffered from the frost or snow to come near a fire, let the limbs be rubbed well with snow, or if snow cannot be procured, let them be put into cold water, and afterwards rubbed with flannel for a considerable time. Let the person be kept most cautiously from taking too much or too nutritious food. Spirits, also, or wine, should under no pretence whatever be given, without being weakened very much with water. Great attention must be paid to the state of the bowels. The use of opium and camphor is much to be recommended, though at first the opium should be given in very small portions."

The narrative ends with this remark—"We are sorry to add, that too free indulgence in spirituous liquor is sup-

posed to have been the cause both of the accident which befel Elizabeth Woodcock, and its fatal consequences."—*Gentlemen's Magazine.*

VEGETABLE KINGDOM.

THE ROCK SAMPHIRE.

BOTANICAL topography, which treats of the stations as well as of the habitations of vegetables, is a subject not wholly without interest and value. It is well known



The Rock Samphire.

that very different plants abound in different soils; that some grow on land, and some in water; that some like one, and some another situation. For example, to take plants which are very closely allied, the *lichens* are dry plants, and never grow under water; the *fuci* are watery

plants, and never grow out of water : and the same may be said of many other plants, some of which are, as it were, the living boundaries of land and sea : thus the Samphire (*Crithmum Maritimum*) never grows but on the sea-shore, and yet it never grows within reach of the waves,—that is to say, it is never so near as to be wholly covered by the waters. It happened not long since, that a knowledge of this fact was useful in a way and at a time when botanic knowledge might, beforehand, have been expected to be of little practical importance.

During a violent storm in November, 1821, a vessel passing through the English Channel, was driven on shore near Beachy Head ; and the whole of the crew being washed overboard, four escaped from the wreck, only to be delivered as they thought to a more lingering and fearful, from its being a more gradual and equally inevitable death ; for, having in the darkness of the night been cast upon the breakers, they found, when they had climbed up the highest of these low rocks, that the waves were rapidly encroaching on their asylum ; and they doubted not, that when the tide should be at its height, the whole range would be entirely covered with water. The darkness of the night prevented any thing being seen beyond the spot upon which they stood, and this was continually decreasing by the successive encroachments of each advancing wave. The violence of the storm left no hope that their feeble voices, even if raised to the uttermost, could be heard on shore ; and they knew that amidst the howling of the blast their cries could reach no other ear than that of God. What human arm could give assistance in such a situation ? even if their distresses were known, how vain were the help of man ! The circle of their existence here seemed gradually lessening before their eyes ; their little span of earth gradually contracting to their destruction : already they had climbed to the highest points, and already the furious waters followed them, flinging over their devoted heads the foremost waves, as heralds of their speedily approaching dissolution. At this moment, one of these wretched men, while they were debating whether they should not,

in this extremity of ill, throw themselves upon the mercy of the waves, hoping to be cast upon some higher ground, as, even if they failed to reach it, a sudden would be better than a lingering death—in this dire extremity, one of these despairing creatures, to hold himself more firmly to the rock, grasped a weed, which, even wet as it was, he well knew, as the lightning's sudden flash afforded a momentary glare, was not a fucus, but a root of *Samphire*; and he recollected that this plant never grows under water. This then became more than an olive branch of peace, a messenger of mercy; by it they knew that He who alone can calm the raging of the seas, at whose voice alone the winds and the waves are still, had placed his landmark, had planted his standard here, and by this sign they were assured that He had said to the wild waste of waters, "Hitherto shalt thou come, and no further." Trusting, then, to the promise of this Angel of the Earth, they remained stationary during the remainder of that dreadful, but then comparatively happy night; and in the morning they were seen from the cliffs above, and conveyed in safety to the shore.—BURNETT's *Introductory Lecture*.

Samphire, or *St. Peter's Wort*, very probably derives its English name, as etymologists contend, from the French name, "*Herbe de St. Pierre*," and hence, if such be the case, it would be more correctly written, according to Smith, *Sampire*, or, as degenerated from *St. Pierre*, *san-pire*.

The botanical name *Crithmum* has been given to this plant from the resemblance its seeds bear to grains of barley, the *crithe* of the Greeks.

ON THE COLOR OF THE SEA.

THOSE who have been accustomed to a life confined in the interior of countries, where only rivulets and shallow rivers flow, where clear fountains rise, or muddy currents roll along, view with admiration the first appearance of the sea, as from the shore they regard the pure and sparkling green complexion of its waters, a color which, in-

deed, seems peculiar to itself. The wonder is increased when a portion of its water, passed into a vessel, is observed to retain no trace of that very peculiar color, and to be perfectly clear. Its transparency is such, that, in places undefiled by filth or dirt, the sand may be distinguished at the bottom of its bed at a considerable depth, and stones and shells of the smallest size, which lie there, appear then bright and resplendent. Marine plants, especially the corallines, beam in it with the greatest splendor; and all productions of this nature are elegantly shaded whilst they are sunk beneath the surface of the water; but as soon as they are taken out this beauty vanishes. Certain *eystoceisa*, called by us *iridea*, as well as many *alcyonia*, which in this fostering element shine in the colors of the rainbow, or in the finest tints of purple and orange, seem there tinged with black, yellow, or simply of a brown or dark violet hue, when cast upon the bank of the shore, lose their attractions by exposure to atmospheric air. As the light penetrates the abyss of waters, and during a cloudless day, as we enjoy an excursion on its surface, the waves appear colored in such a manner around us, that we are sometimes inclined to believe, as we admire the deepness of its green, that we are upon a liquid meadow, or upon a billiard-table carpet which could be translucent. In proportion as the vessel becomes distant from the shore, and we reach the high latitudes, where the depth increases more and more, the green tint changes into a blue tint, and in the open sea the water becomes, at fifty or sixty fathoms, of the finest azure color. The green shade generally announces danger, or an approach to low coasts; for along those which are intersected with peaks or mountains, and near which the sound descends to a great extent, the blue azure is observed to appear, and to become much more lively as the depth becomes more considerable. But this blue, which is ordinarily regarded as one of the characteristics of the ocean, and which is commonly attributed to the manner in which the rays of the sun become decomposed, as they penetrate into the waters, is not, however, exclusively peculiar to it; every large and deep bed of water has a cast of a similar

nature. Deep lakes, which are not salt, especially those among high mountains, are equally affected by the blue azure tint; and this beautiful shade is observed even in the bed of torrents, at the bottom of which, if the water fills a cavity in a rock, the serenity of the heavens produces, in a small degree, the most brilliant effect of coloration. —*Translation from Bory de St. Vincent, by Professor Rennie.*

NATURAL HISTORY.

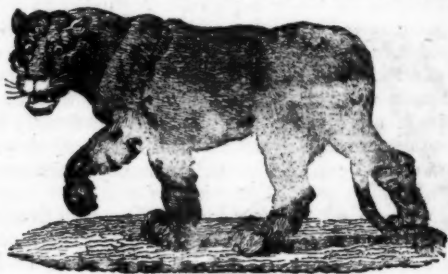
THE LION.



THE most interesting object of a menagerie is probably its lion; and there are few persons who are not familiar with the general appearance of this most powerful animal. To behold, in perfect security, that creature which is the terror of all travellers in the regions where he abounds; which is said to be able to bear off a buffalo on his back, and crush the skull of a horse by a single stroke of his paw—is certainly gratifying to a reasonable curiosity. The appearance of dignified self-

possession which the lion displays when at rest; his general indifference to slight provocations; his haughty growl when he is roused by the importunities of his keepers or the excitement of the multitude; his impatient roar when he is expecting his daily meal, and his frightful avidity when he is at length enabled to seize upon his allotted portion;—these are traits of his character in confinement which are familiar to almost every one.

The ordinary length of the lion, from the end of the muzzle to the insertion of the tail, is about six feet, and the height about three feet. The uniformity of his color is well known, being of a pale tawny above, and somewhat lighter beneath; and his enormous mane is a characteristic which no one can forget. The long tuft of rather black hair, which terminates his tail, may not have been so generally observed; but this is peculiar to his species. The pupils of his eyes are round. The lioness differs from the lion, in the want of a mane;

*The Lioness.*

in the more slender proportions of her body; and in the comparative smallness of her head.

To understand the natural habits of the lion, we must not be satisfied to observe him in menageries, where, ordinarily, his disposition is soon subjected by that fear of man which constitutes a feature of his character. We may, indeed, observe the form of this magnificent beast; and may occasionally be delighted by his gentleness

and entire submission to the commands of his capricious masters. But we must compare our own impressions of his character with the accounts of intelligent travellers; we must examine the peculiar structure of his body, as developed by skilful and patient anatomists; and we may then return to view the lion of the show, man with correct notions of his physical powers, and with unromantic estimates of his moral qualities. It has been too much the fashion with writers on natural history to have their antipathies and their partialities towards the ferocious quadrupeds; and thus, as the hyæna has been represented as combining every disgusting and offensive habit, so has the lion been painted as possessed of the most noble and magnanimous affections. "The King of the beasts" is a name applied to him, with which every one is familiar. In physical strength he is indeed unequalled. He is ordained by nature to live on animal food, and fitted for the destruction of animal life by the most tremendous machinery that could be organized for such a purpose, regulated by a cunning peculiar to his species. But when we investigate the modes in which he employs these powers, we may perhaps be inclined to leave the stories of his generosity to the poets and romance-writers, who (as well as the authors of more sober relations) have generally been too much inclined to invest physical force with those attributes of real courage and magnanimity which are not always found in association with it.

It has been often stated by travellers in Africa, and the statement has been repeated by Mr. Pringle, upon the authority of a chief of the Bechuanas, that the lion, after he has made his fatal spring upon the giraffe when he comes to drink at the pools, is carried away for miles, fixed on the neck of that fleet and powerful creature, before his victim sinks under him.

At the time when men first adopted the lion as the emblem of courage, it would seem that they regarded great size and strength as indicating it; but they were greatly mistaken in the character they have given to this indolent, skulking animal, and have overlooked a much

better example of true courage, and of other virtues also, in the bold and faithful dog.

The natural habits of the lion are certainly those of treachery; he is not disposed, under any circumstances, to meet his prey face to face; and he is particularly unwilling to encounter man, when he crosses him in the full blaze of day.

Mr. Barrow tells an interesting anecdote of the escape of a Hottentot from a lion, which pursued him from a pool of water where he was driving his cattle to drink, to an aloe tree, in which the man remained for twenty-four hours, while the lion laid himself down at the foot. The perseverance of the beast was at length worn out by his desire to drink; and in his temporary absence to satisfy his thirst, the Hottentot fled to his home about a mile off. The lion, however, returned to the aloe tree, and tracked the man within three hundred paces of his house.

Mr. Pringle, who had extraordinary opportunities of observing the habits of the half-civilized natives of Southern Africa, and of becoming acquainted with the characteristics of the wild beasts with which that part of the world abounds, has given us a very good description of a lion-hunt, in which he and several of his countrymen, all somewhat inexperienced in such adventures, was engaged. Mr. Pringle was a settler on the eastern frontier of the Cape Colony; and in 1822 was residing on his farm, or "location," at Bavian's River. We should deprive his account of a lion-hunt of its interest, if we attempted to give it in any other than his own words:—

"One night, a lion, that had previously purloined a few sheep out of my kraal, came down and killed my riding horse, about a hundred yards from the door of my cabin. Knowing that the lion, when he does not carry off his prey, usually conceals himself in the vicinity, and is very apt to be dangerous by prowling about the place in search of more game, I resolved to have him destroyed or dislodged without delay. I therefore sent a messenger round the location, to invite all who

were willing to assist in the enterprise, to repair to the place of rendezvous as speedily as possible. In an hour every man of the party, (with the exception of two pluckless fellows, who were kept at home by the women,) appeared ready mounted and armed. We were also reinforced by about a dozen of the 'Bastaard' or Mulatto Hottentots, who resided at that time upon our territory as tenants or herdsmen,—an active and enterprising, though rather an unsteady race of men. Our friends, the Tarka boors, many of whom are excellent lion-hunters, were all too far distant to assist us—our nearest neighbors residing at least twenty miles from the location. We were, therefore, on account of our own inexperience, obliged to make our Hottentots the leaders of the chase.

"The first point was to track the lion to his covert. This was effected by a few of the Hottentots on foot. Commencing from the spot where the horse was killed, they followed the *spoor** through grass and gravel and brushwood, with astonishing ease and dexterity, where an inexperienced eye could discern neither footprint nor mark of any kind,—until, at length, we fairly tracked him into a large *bosch*, or straggling thicket of brushwood and evergreens, about a mile distant.

"The next object was to drive him out of this retreat, in order to attack him in close phalanx, and with more safety and effect. The improved mode in such cases is to torment him with dogs till he abandons his covert, and stands at bay in the open plain. The whole band of hunters then march forward together, and fire deliberately, one by one. If he does not speedily fall, but grows angry and turns upon his enemies, they must then stand close in a circle, and turn their horses rear outward; some holding them fast by the bridles, while the others kneel to take a steady aim at the lion as he approaches, sometimes up to the very horses' heels—couching every now and then, as if to measure the distance and strength of his enemies. This is the moment to shoot him fairly in the forehead, or some other mortal part. If they cor-

* The Hottentot name for a footmark.

tinue to wound him ineffectually till he waxes furious and desperate; or if the horses, startled by his terrific roar, grow frantic with terror and burst loose, the business becomes rather serious, and may end in mischief—especially if all the party are not men of courage, coolness, and experience. The frontier Boors are, however, generally such excellent marksmen, and withal so cool and deliberate, that they seldom fail to shoot him dead as soon as they get within a fair distance.

"In the present instance, we did not manage matters quite so scientifically. The Bastards, after recounting to us all these and other sage laws of lion-hunting, were themselves the first to depart from them. Finding that the few indifferent hounds we had made little impression on the enemy, they divided themselves into two or three parties, and rode round the jungle, firing into the spot where the dogs were barking round him, but without effect. At length, after some hours spent in thus beating about the bush, the Scottish blood of some of my countrymen began to get impatient; and three of them announced their determination to march in and beard the lion in his den, provided three of the Bastards, (who were superior marksmen,) would support them, and follow up their fire, should the enemy venture to give battle. Accordingly, in they went, (in spite of the warnings of some more prudent men among us,) to within fifteen or twenty paces of the spot where the animal lay concealed. He was couched among the roots of a large evergreen bush, with a small space of open ground on one side of it; and they fancied, on approaching, that they saw him distinctly, lying glaring at them from under the foliage. Charging the Bastards to stand firm and level fair should *they* miss, the Scottish champions let fly together, and struck—not the lion, as it afterwards proved, but a great block of red stone, beyond which he was actually lying. Whether any of the shot grazed him is uncertain, but, with no other warning than a furious growl, forth he bolted from the bush. The pusillanimous Bastards, in place of now pouring in their volley upon him, instantly turned, and fled helter-skelter,

leaving him to do his pleasure upon the defenceless Scots—who, with empty guns, were tumbling over each other, in their hurry to escape the clutch of the rampant savage. In a twinkling he was upon them, and with one stroke of his paw dashed the nearest to the ground. The scene was terrific! There stood the lion with his foot upon his prostrate foe, looking round in conscious power and pride upon the bands of his assailants—and with a port the most noble and imposing that can be conceived. It was the most magnificent thing I ever witnessed. The danger of our friends, however, rendered it at the moment too terrible to enjoy either the grand or the ludicrous part of the picture. We expected every instant to see one or more of them torn in pieces; nor, though the rest of the party were standing within fifty paces with their guns cocked and levelled, durst we fire for their assistance. One was lying under the lion's paw, and the others scrambling towards us in such a way as to intercept our aim at him. All this passed far more rapidly than I have described it. But luckily the lion, after steadily surveying us for a few seconds, seemed willing to be quits with us on fair terms; and with a fortunate forbearance, (for which he met but an ungrateful recompense,) turned calmly away, and driving the snarling dogs like rats from among his heels, bounded over the adjoining thicket like a cat over a footstool, clearing brakes and bushes twelve or fifteen feet high as readily as if they had been tufts of grass, and abandoning the jungle, retreated towards the mountains.

"After ascertaining the state of our rescued comrade, (who fortunately had sustained no other injury than a slight scratch on the back, and a severe bruise in the ribs, from the force with which the animal had dashed him to the ground,) we renewed the chase with Hottentots and hounds in full cry. In a short time we again came up with the enemy, and found him standing at bay under an old mimosa-tree, by the side of a mountain-stream, which we had distinguished by the name of Douglas Water. The dogs were barking round, but afraid to approach him, for he was now beginning to

growl fiercely, and to brandish his tail in a manner that showed he was meditating mischief. The Hottentots, by taking a circuit between him and the mountain, crossed the stream, and took a position on the top of a precipice overlooking the spot where he stood. Another party of us occupied a position on the other side of the glen: and placing the poor fellow thus between two fires, which confused his attention, and prevented his retreat, we kept battering away at him, till he fell, unable again to grapple with us, pierced with many wounds.

"He proved to be a full grown lion of the yellow variety, about five or six years of age. He measured nearly twelve feet from the nose to the tip of the tail. His fore leg below the knee was so thick that I could not span it with both hands; and his neck, breast, and limbs appeared, when the skin was taken off, a complete congeries of sinews."*

CHARACTER OF THE ARABS,

ILLUSTRATING GEN. XVI. 12.

THE Arabians have always been commended by the ancients for their fidelity, and they are still scrupulously exact to their word. They have however their vices and defects: they are naturally addicted to war, bloodshed, and cruelty, and so malicious, as scarcely ever to forget an injury. Their frequent robberies committed on traders and travellers, have rendered the name of an Arab almost infamous in Europe: so faithful has been the prophecy, "their hands shall be against every man, and every man's against them." Amongst themselves, however, they are most honest and true to the rites of hospitality: towards those whom they receive into their camp every thing is open: enter but once into the tent of an Arab, and by the pressure of his hand he ensures you protection, at the hazard even of his life: he is ever true to his bread and his salt; once eat with him, and a knot of friendship is tied which cannot easily be loosened.

* Notes to Pringle's Ephemerides.

Hospitality was ever habitual to them : at this day, the greatest reproach to an Arab tribe is, "that none of their men have the heart to give." Nor does this feeling of liberality extend to those only of high birth ; the poor and wandering Bedouin is often known to practise a degree of charity far beyond his means, from a sense of duty alone. The love of country discoverable in the wildest tenant of the most barren rock, is not felt by the wandering Arab ; he roves from district to district, from pasture to pasture, without any local attachment, and his sole delight is his irregular, predatory life. Many of the elder chiefs plan new expeditions with as much glee, as if they were but just beginning life, instead of tottering on the brink of death. But notwithstanding all his savageness, there are sometimes noble thoughts seen to cross over his powerful mind, and then again to leave him choked up with weeds of too strong a growth to be rooted out.

Their fondness for the traditional history of their ancestors is proverbial. Professed story-tellers are the appendages to a man of rank : his friends will assemble before his tent, to listen night after night to a continued history, for sometimes sixty nights together ; it is a great exercise of genius, and a peculiar gift held in high estimation among them. They have a quickness and clearness of delivery, with a perfect command of words, surprising to an European ear. Their descriptions are highly poetical, their extempore songs are also full of fire, and possess many beautiful and happy similes. Arabic songs go to the heart, and greatly excite the passions. Certain of their tribes are highly celebrated for this gift of extempore speaking and singing, and it is often possessed to an astonishing degree, by men unable either to read or write. Many of these children of the desert possess intelligence and feeling which belong not to the savage, accompanied by an heroic courage, and a thorough contempt of every mode of gaining a livelihood, except by the sword and gun. They value themselves chiefly on their expertness in arms, horsemanship, and hospitality : irritable and fiery, their common con-

versation appears to be one continued strife; they are however brave, eloquent, and deeply sensible of shame.
—*Denham and Clapperton's Africa.*

PROGRESS OF THE SCIENCES.

THE first savages collected in the forests a few nourishing fruits, a few salutary roots, and thus supplied their most immediate wants. The first shepherds observed that the stars moved in a regular course, and made use of them to guide their journeys across the plains of the desert. Such was the origin of the mathematical and physical sciences. Once convinced that it could combat nature by the means which she herself afforded, genius reposed no more, it watched her without relaxation, it incessantly made new conquests over her, all of them distinguished by some improvement in the situation of our race. From that time a succession of conducting minds, faithful depositories of the attainments already made, constantly occupied in connecting them, in vivifying them by means of each other, have conducted us, in less than forty ages, from the first essays of rude observers, to the profound calculations of Newton and La Place, to the learned classifications of Linnæus and Jussieu. This precious inheritance, perpetually increasing, brought from Chaldea into Egypt, from Egypt into Greece, concealed during ages of disaster and of darkness, recovered in more fortunate times, unequally spread among the nations of Europe, has every where been followed by wealth and power; the nations which have reaped it are become the mistresses of the world; such as have neglected it, are fallen into weakness and obscurity.—*Curtis's Lectures on the Physiology of the Ear.*

Love is the great instrument and engine of nature, the bond and cement of society, the spring and spirit of the universe.—*DR. SOUTH.*

The crude admiration which can make no distinctions, never renders justice to what is really great.—*FOSTER.*

THE GENIUS OF DEATH.

WHAT is death ? 'Tis to be free
 From earthly love, or hope, or fear,
 To join the great Equality.—
 All alike are humbled there.
 The mighty grave wraps lord and slave,
 Nor pride nor poverty dares come
 Within that refuge-house—the Tomb.

Spirit with the drooping wing
 And the ever-weeping eye,
 Thou of all earth's kings art king,
 Empires at thy footstool lie.
 Beneath thee strew'd, their multitude
 Sink like waves upon the shore :
 Storms shall never rouse them more.

What's the grandeur of the earth
 To the grandeur round thy throne!
 Riches, glory, beauty, birth,
 'To thy kingdom all have gone !
 Before thee stand the wondrous band,
 Bards, heroes, sages, side by side,
 Who darken'd nations when they died.

Earth has hosts, but thou canst show
 Many a million for her one :
 Through thy gates the mortal flow
 Has for countless years roll'd on.
 Back from the tomb no step has come ;
 There fix'd, till the last thunder's sound
 Shall bid thy prisoners be unbound !

ILLUSTRATIONS OF NATURAL PHENOMENA.

No. III. THE TIDES OF RIVERS.

THERE is a circumstance connected with the subject of the tides, which may have created a difficulty in the minds of some of our readers. When we speak of a tide-wave advancing at the rate of fifty or a hundred miles in an hour, we are apt at once to think of a *current* of water running at that rate, whereas, every body knows that it is a very strong tide that runs at the rate of four miles an hour. A little attention will show, that the advance of the ridge of the *tide-wave* is a very different thing from the motion of a *current* in the water. If

a ship were becalmed at the entrance of the English channel, she would be *lifted* by the high-water wave, we will suppose, at three o'clock in the afternoon. A fleet riding at anchor in the Downs, would be *lifted* by the very same tide-wave at twelve o'clock that night; the wave having passed all the way up the channel, at the rate of about fifty miles an hour. But the motion of the water which would carry the first ship *along*, or be observed as the rate of the current *past* the ships at anchor, would probably not be above two miles an hour; and might not be even in the same direction with that of the tide-wave.

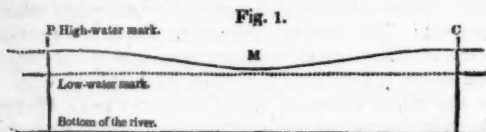
Any person may easily convince himself that the motion of waves is not necessarily accompanied with a current of the water in the same direction, by throwing any light substance into the sea a little beyond the breakers, or into a piece of standing water, the surface of which is ruffled. He will see that such a floating body rises and falls, with the motion of the waves, but does not perceptibly move towards the shore.

A field of corn gives another very good instance of waves, without any advancing *motion* of the parts which form them. We may see the waves chase one another over the bending tops of the corn; but every ear which is bent down, comes back to its first position.

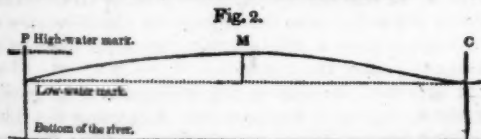
In the tides, however, there is usually *some* current occasioned by the advance of the tide-wave: and this current is stronger in places where the sea is shallowest or in funnel-shaped channels, such as the mouth of the Severn, or of other large rivers. It must be carefully observed, however, that the change in the *direction* of this current is quite a different thing from the change in the *rise* and *fall* of the water.

The nature of the tide in large rivers will be easily understood, after what has been said respecting the tides in narrow seas. Whenever the top of the tide-wave reaches the mouth of a river, it raises the water there, and sends an undulation up the river, which advances with greater or less rapidity, according to circumstances checking the current, but not always driving it back:

and causing high water in succession, as it reaches the different parts of the river. The tide-wave advances up the Thames at about twenty miles an hour. There are no rivers in England which are long enough to show the whole effect of the tide-wave in its progress; but in the great rivers of America, and in other parts of the world, it may be distinctly traced. Thus, in the river Delaware, upon which the city of Philadelphia is built, it is high water at Philadelphia at the same time as at the mouth of the river, one hundred and forty miles distant: and about half way down there is low water at the same instant. Again, when it is high water at the *middle* point, it is low water at the two extremities. The surface of that part of the river which lies between the capes, at the mouth of the Delaware, and the city of Philadelphia, forms a long wave, the distance from ridge to ridge being one hundred and forty miles: when it is high water at Philadelphia and at the mouth, the wave has the position represented in fig. 1, in which *p* represents Philadelphia and *c* the capes: and, when it is low water at the same points, the surface has assumed the po-



sition represented in fig. 2: the water having sunk at the two extremities, and risen in the middle.



In rivers of very great length there may be several of these tide waves going on at once, causing high-water at every ridge, and low water at every hollow; and producing the different variations of the tide at the correspond-

ing points of each wave, in the manner represented in fig. 3.



It is therefore a great mistake to suppose that when it is high water, for instance, at London Bridge, the water is at the same level all the way down the river. The water will continue to rise at London Bridge for some time after it has begun to sink at Gravesend; and again, will be sinking at London Bridge, for an hour after the water has begun to rise at Gravesend.

It will be seen also, that, although the water is much deeper, at any *place*, at high water, than at low water, yet, in a whole river of great extent there may not be much more water at one time than at another; and that the currents caused by the tides will, upon the whole, act as much one way as another.

On the coast of Suffolk, near where an opening has been lately made into the sea, to form a canal which shall be navigable for ships to Norwich, a circumstance is said to occur, which shows very clearly the motion of the tide-wave up the channel of a river. Upon great part of that coast, the sea is constantly throwing up a shingly beach, which stops the straight course of the rivers into the sea, and causes them to run along within a few yards of the sea for several miles, before they can find an outlet. Such a river runs near the coast at *c*, where its mouth originally was: but it is there turned to the southward by the high beach, and really enters the sea at *m*, some miles lower down. Now it is high water in the sea at *A* when the tide-wave, coming from the north, arrives there; it is high water at *m* somewhat later; but it is not high water at *c*, in the river, until the tide-wave from *m* has been propagated along the narrow



and winding bed of the river from *m* to *c*. It so happens, that nearly six hours are taken up in the progress of the tide-wave from *A* round *m* to *c*; so that by the time it is *high water* at *c* in the river, it is *low water* in the sea at *A*, only a few yards distant; and, again, when it is *low water* at *c*, it is *high water* at *A*.

The height of the tides, at different places, depends upon the direction and form of the coast, and other causes, which vary with almost every different situation. The highest tides upon the coast of England occur in the Severn, where the tide-wave comes in, in one large ridge, accompanied with a roaring noise, and with such violence as often to prove destructive to the small craft; it rises there to the height of forty feet.

The reason of this great height of the tide is easily seen. The mouth of the Bristol Channel is very wide, and opens to the South-west, so as to receive the tide-wave from the Atlantic Ocean; but the Channel becomes narrower by degrees, and near Chepstow is very much contracted; the water is, therefore, heaped up at the upper end of the Channel, much above the level to which it would otherwise rise.

We have now seen that the action of the moon upon the ocean produces the constant and beneficial changes in the waters of the sea and of rivers, which are called tides. The action of the sun produces also tides; but the effect is less, since the sun is at a much greater distance from the earth than the moon is. The influence of the sun is, however, very sensible in causing the *spring* and *neap* tides. When the sun and moon are either together, or directly opposite to each other, that is, at *new* and *full moon*, the tides occasioned by each happen at the same hour; they are, therefore, much greater than ordinary, or there are *spring-tides*. But when the moon is half way between these two positions, or at the *quarters*, if at any place, it would be *high water* by the action of the moon, it would be *low water* by the action of the sun. The sinking thus occasioned by the sun, takes off from the rising caused by the moon; the tide, therefore, does

not rise so high as the average, or there are *neap-tides*.

ST. THOMAS'S CHURCH,

CORNER OF BROADWAY AND HOUSTON STREET.

THIS beautiful edifice, erected in 1824-6, exhibits the best specimen of the gothic style of architecture in the city of New York. The walls are constructed of marble, rough from the quarry; the buttresses, window-casings, imposts, mouldings, bands, battlements, shields, tablets, and pinnacles, are of brown free-stone, finely wrought. The plan of the building is rectangular, with a front of sixty-six feet, flanked by two octagon towers, twelve feet in diameter, and seventy-three feet in height,



St. Thomas's Church.

supported by buttresses. Between the towers is a large circular case, or catherine wheel window, thirty-one feet high, and twenty feet six inches wide, divided by mullions into twelve compartments, with a head of the most elegant tracery, presenting a very imposing appearance. Immediately under this window is the principal entrance, under a Tudor arch, resting upon columns of free-stone, and flanked with blank niches, trefoil headed. Other doors give entrance into the body of the church through the towers. The sides are one hundred and thirteen feet in length, containing six lofty pointed arched windows each, the sashes glazed in diamond form, and the head of

each containing a fleur-de-lis of rich stained glass. The body of the church contains three aisles parallel with the sides, and two cross aisles, giving entrance to the pews, which are finished in an uncommon style of neatness, each door containing panels with quarter-foil tracery. The pulpit, chancel, and organ gallery, are ornamented with panelling from the chapel of Henry VII. The nave is also ornamented with panelling rising from side ceilings, supported by open brackets, with pendants; these, together with pews, doors, &c. are all painted in imitation of wainscot oak.

MINERAL KINGDOM.

No. 4.—COPPER.

COPPER, one of the metals of which nature is most lavish, appears to occupy two great regions of the globe, which admits of its being distinctly defined. We know that it abounds in Norway, in Sweden, in Hungary, in England, in the Uralian mountains, throughout all Siberia, in Chinese Tartary, and Japan. We must also add, that several islands between Kamtschatka and America, produce masses of native copper; that immense beds of it are found upon the banks of the Ohio; and, lastly, that there have been signs of its existence in Greenland and in Iceland. This metal, then, seems to be common to all the countries situated in a zone of about 45 degrees of latitude around the northern pole. But it is found on the other side, over all the south of Africa, from Congo to the Cape of Good Hope, and according to Beniouski, in Madagascar. One of the largest masses of native copper ever noticed was discovered by Schoolcraft, in the North-West Territory, about thirty miles from Lake Superior, on the west bank of the river Ontonagon; it weighs, by estimation, two thousand two hundred pounds. It lies near the water's edge, at the foot of an elevated bank of alluvion. It is frequently found in con-

nexion with the secondary greenstone and red sandstone formations in the United States.

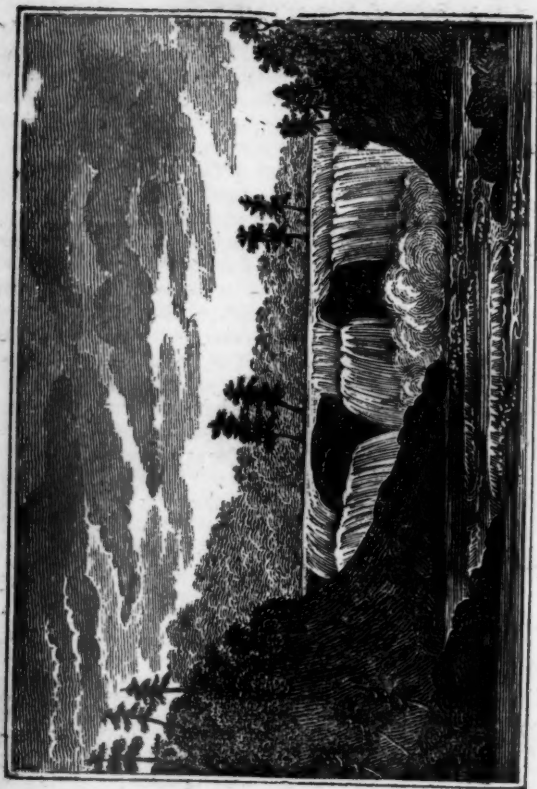
The southern extremity of America appears also to contain considerable mines of it; and Brazil presents to our view an immense block of it in its native state. It appears, therefore, that this mineral is accumulated at the two extremities of the two great continents. We must at the same time admit, that this interesting sketch may meet with objections, drawn from the existence of extensive mines of copper in the country of Morocco, in the island of Cyprus and Turkish Armenia—mines, which, by connecting together the two regions just pointed out, compel us to regard copper as a substance common to all the zones of our planet.

Sulphuric acid, either concentrated or diluted, oxidates it, and combines with the peroxide, especially when assisted by heat. The solution is of a blue color, and, when evaporated, affords crystals in the form of rhomboidal prisms. This salt is the *blue vitriol* of commerce, and is usually obtained either by evaporation of the solution of it, formed by the infiltration of water through copper mines, or by exposure of sulphuret of copper to the action of air and humidity, until the sulphur is converted into sulphuric acid, and the metal is oxidated and combined with it. Copper is slowly oxidated by a number of the weaker acids, as by some vegetable juices, when acted on by them with the admission of air. Acetic acid, or vinegar, in particular, forms an important compound with the oxide of copper; to obtain it, copper plates are exposed to the fumes of vinegar. A crust is soon formed of a green color, which is the *verdegris* of commerce. All the salts of copper are decomposed by the alkalies and earths.

Bronze is an alloy of copper, with about eight or ten per cent of tin, together with small quantities of other metals, which are not essential to the compound. Cannons are cast with an alloy of a similar kind, and the ancient bronze statues were of nearly the same composition. *Bell metal* is composed of 80 parts of copper, and 20 of tin. The Indian gong, so much celebrated for the rich-

ness of its tones, contains copper and tin in this proportion. *Brass*.—Copper and zinc unite in several proportions, forming alloys of great importance in the arts. The best brass consists of four parts of copper to one of zinc; and when the latter is in greater proportion, compounds are formed, called *tombac*, *Dutch gold*, and *pinchbeck*. The brothers Keller, who were very celebrated statue founders, used an alloy, 10,000 parts of which contained 9140 of copper, 553 of zinc, 170 of tin, and 137 of lead. Their castings are famous, and some are of very large size, as the equestrian statue of Louis the fourteenth, cast at a single jet, in 1699, which is twenty-one feet high, and weighs 53,263 French pounds. These statues are usually called *bronze* statues, although made of brass. Brass was well known to the Romans, under the name of *orichalcum*, who took advantage of its resemblance to gold, in robbing the temples, and other public places, of that precious metal. Thus Julius Cæsar robbed the capitol of 3000 pounds weight of gold, and Vitellius despoiled the temples of their gifts and ornaments, and replaced them with this inferior compound. The art of *tinuing* copper, consists in covering that metal with a thin layer of tin, in order to protect its surface from rusting. For this purpose, pieces of tin are placed upon a well polished sheet of copper, which, if the process is skilfully conducted, adhere uniformly to its surface. The oxidation of the tin, a circumstance which would entirely prevent the success of this operation, is avoided by employing fragments of resin, or muriate of ammonia, and regulating the temperature with great care.

WE fall not from virtue, like Vulcan from heaven, in a day. Bad dispositions require some time to grow into bad habits; bad habits must undermine good, and often repeated acts make us habitually evil; so that by gradual depravations, and while we are but staggeringly evil, we are not left without parentheses of consideration, thoughtful rebukes, and merciful interventions to recall us to ourselves.—*Sir Thomas Brown*.



FALLS OF THE CHAUDIERE.